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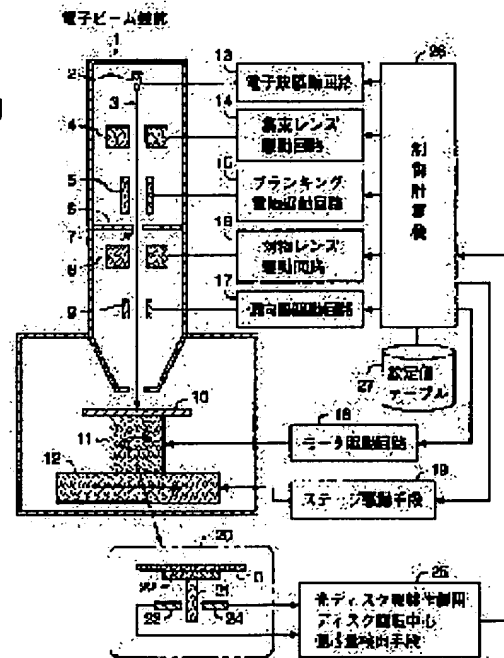
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(54) ELECTRON BEAM IRRADIATION METHOD AND ITS APPARATUS

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a high-quality optical master disk by irradiating a disk for manufacturing an optical master disk with an electron beam in such a manner that the dosage per unit area of respective pit forming portions is kept constant regardless of the positions in a radial direction, thereby making it possible to form the pits of the same accuracy in shape regardless of the positions in the radial direction.

SOLUTION: The disk 10 for manufacturing the optical master disk is rotated at a constant angular speed by the entire pit forming region or every concentrically segmented pit forming region by control of a motor drive circuit 18 by a control computer 26. The disk is irradiated with the electronic 3 from an electron gun 2 in such a manner that the dosage per unit area of the respective pit forming portions is kept constant regardless of the positions in the radial direction. The respective pit forming portions are, therefore, plotted by one piece of electron beam pulse and the electron beam current value is so controlled as to be made larger nearer the outer side in the radial direction of the disk 10 within the region to be plotted with the pits. As a result, the pits of the same accuracy in terms of shapes and the high accuracy in terms of positions are obtained.



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